



DeSoto National Wildlife Refuge Comprehensive Conservation Plan

Table of Contents

Executive Summary.....	i
Chapter 1 — Introduction and Background.....	1
Introduction.....	2
The Refuge Vision.....	5
Purpose of and Need for the Plan.....	5
The U.S. Fish and Wildlife Service.....	6
The National Wildlife Refuge System.....	6
Existing Partnerships.....	8
Legal and Policy Guidance.....	9
Chapter 2 — The Planning Process.....	10
Issues.....	10
Wildlife Populations and Habitat Management.....	13
Resource Protection.....	16
Public Education and Recreation.....	16
Partnerships.....	17
Chapter 3 — The Refuge Environment.....	18

DeSoto National Wildlife Refuge
Draft Comprehensive Conservation Plan
Table of Contents



Geographic/Ecosystem Setting.....	18
The Lower Missouri River Ecosystem.....	18
Migratory Bird Conservation Initiatives.....	22
Partners in Flight.....	22
North American Waterfowl Management Plan.....	23
Arctic Goose Management Initiative.....	
Region 3 Fish & Wildlife Conservation Priorities.....	25
Refuge Resources, Cultural Values and Uses.....	26
General.....	26
Climate.....	26
Geology, Hydrology and Soils.....	27
Wetlands.....	28
Vegetation.....	28
Fish and Wildlife.....	30
Land Use and Zoning.....	35
Contaminants and Water Quality.....	35
Socioeconomic Environment.....	37
Cultural Resources.....	39
Public Use.....	42
Special Management Topic.....	44
Wilderness Review.....	44
Chapter 4 — Current Refuge Management and Programs.....	45



DeSoto National Wildlife Refuge
Draft Comprehensive Conservation Plan
Table of Contents

Habitat Management.....	
45	
DeSoto Lake.....	
46	
Wetlands and Moist Soil Units.....	
42	
Grasslands.....	
47	
Croplands.....	
48	
Woodlands.....	
48	
Plant Pest Control.....	
50	
Habitat Restoration.....	
51	
Wetlands Restoration — Off Refuge.....	
51	
Upland Restoration — Off Refuge.....	
51	
Upland Restoration — On Refuge.....	
51	
Fish and Wildlife Management.....	
51	
Monitoring and Studies.....	
51	
Game Management.....	
53	
DeSoto Lake Fishery Management.....	
55	
Bird Banding.....	
56	
Disease Monitoring and Treatment.....	
57	
Nest Structures.....	
57	
Other Wildlife Management Activities.....	
57	
Resource Protection.....	
57	
Law Enforcement.....	
57	
Cultural Resource Management.....	
58	

DeSoto National Wildlife Refuge
Draft Comprehensive Conservation Plan
Table of Contents



Facilities Maintenance.....	61
Safety.....	61
Public Education and Recreation.....	61
Visitor Center Programs.....	62
Entrance Fees and Permits.....	64
Interpretive Programs and Non-Consumptive Uses.....	65
Environmental Education.....	65
Consumptive Uses.....	65
Outreach.....	66
Coordination and Partnering.....	67
 Chapter 5 — Planned Refuge Management and Programs.....	
Introduction.....	69
Goals, Objectives, and Strategies.....	73
Wildlife Populations and Habitat Management.....	73
Resource Protection.....	86
Public Education and Recreation.....	88
Partnerships.....	95
 Chapter 6 — Plan Implementation.....	
Personnel Needs.....	100
Funding.....	100
Step-down Management Plans.....	101
Partnership Opportunities.....	102
Monitoring and Evaluation.....	



DeSoto National Wildlife Refuge
Draft Comprehensive Conservation Plan
Table of Contents

103

Appendix A — Environmental Assessment.....	
107	
Abstract.....	
107	
Chapter 1 — Purpose and Need for the Proposed Action.....	
108	
Purpose and Need for Action.....	
108	
Background.....	
108	
Decision Framework.....	
109	
Authority, Legal Compliance, and Compatibility.....	
110	
Scoping of the Issues.....	110
Issues and Concerns.....	110
Chapter 2 — Alternatives for Management.....	
113	
Introduction.....	
113	
Formulation of Alternatives.....	
113	
Descriptions of Alternatives.....	
114	
Alternative A: No Action (Current Management).....	
114	
Alternative B: Maximize Historic Habitat Restoration.....	115
Alternative C: Maximize Compatible Public Uses.....	116
Alternative D: Optimize Natural Resources & Public Use.....	117
Chapter 3 — Affected Environment.....	
119	
Chapter 4 — Environmental Consequences.....	
126	
Effects Common to All Alternatives.....	
126	
Cultural Resources.....	
126	
Other Topics.....	
126	
Effects that Vary Between Alternatives.....	
126	
Alternative A.....	



126	Alternative B.....	127
	Alternative C.....	
128	Alternative D.....	
130	Alternatives Matrix.....	
132	Chapter 5 — List of Preparers.....	
143	Chapter 6 — List of Agencies and Persons Consulted.....	
145	Chapter 7 — References.....	
	145	
Appendix B — Glossary.....		
146		
Appendix C — Refuge Operations Needs (RONS) and Maintenance Management Systems (MMS) Lists.....		
148		
Appendix D — Compatibility Determinations.....		
156		
Appendix E — Species Lists.....		
178		
Appendix F — Compliance Requirements.....		
206		
Appendix G — Bibliography.....		
210		
Appendix H — Mailing List.....		
219		
Appendix I — Cropland Evaluation Matrix.....		
222		
Appendix J — List of Preparers.....		
226		



DeSoto National Wildlife Refuge
Draft Comprehensive Conservation Plan
Table of Contents

List of Figures

1. DeSoto National Wildlife Refuge Vicinity Map.....	3
2. Ecosystems of Region 3 of the U.S. Fish and Wildlife Service.....	19
3. Land Uses on DeSoto National Wildlife Refuge in 1999.....	36
4. DeSoto National Wildlife Refuge Public Use Facilities.....	63
5. Proposed Future Land Uses on DeSoto National Wildlife Refuge.....	72

List of Tables

1. Threatened and Endangered Species in the Vicinity of DeSoto Refuge.....	34
2. FY 1999 Comparative Visitation to DeSoto National Wildlife Refuge.....	43

List of Photographs and Drawings

Snow goose by Bob Hines, USFWS.....	v
DeSoto National Wildlife Refuge Visitor Center.....	viii
Snow geese flock on lake in front of DeSoto Visitor Center, November 1982.....	x
Steamboat <i>Bertrand</i> sinking in 1865 on what is now DeSoto National Wildlife Refuge....	x
White pelican at DeSoto NWR.....	7
Steamboat <i>Bertrand</i> model in DeSoto Visitor Center.....	8
DeSoto volunteer Jack Brownrigg and Treynor (IA) School students.....	9
DeSoto Lake in winter.....	14
Snow geese fill the sky at DeSoto every autumn.....	15
Fishing clinic at DeSoto Lake.....	17
Bald eagle.....	21

DeSoto National Wildlife Refuge
Draft Comprehensive Conservation Plan
Table of Contents



DeSoto staff banding Canada geese.....	23
Loggerhead shrike.....	26
White-tailed buck in DeSoto bottomland forest.....	29
Kestrel.....	31
Channel catfish.....	32
Piping plover.....	33
<i>Bertrand</i> cargo exhibit in Visitor Center.....	41
View of geese on DeSoto Lake from Visitor Center.....	43
Morel mushroom.....	44
Looking south along DeSoto Lake from near the Missouri Meander Trail.....	46
Aquatic vegetation in DeSoto wetland.....	47
Daisy fleabane.....	48
Great horned owl.....	49
White-tailed deer at DeSoto NWR.....	53
Snow geese over DeSoto Refuge.....	54
1984-85 Duck Stamp — American widgeon.....	55
Largemouth bass.....	56
<i>Bertrand</i> Collection artifacts.....	59
DeSoto Refuge Visitor Center beside DeSoto Lake.....	62
Rose-breasted grosbeak painting by Louis Agassiz Fuertes.....	66
“Suitcase for survival”.....	68
DeSoto National Wildlife Refuge, DeSoto Lake, and the Missouri River.....	69
Excavating the <i>Bertrand</i> in the late 1960's.....	70
Beaver.....	

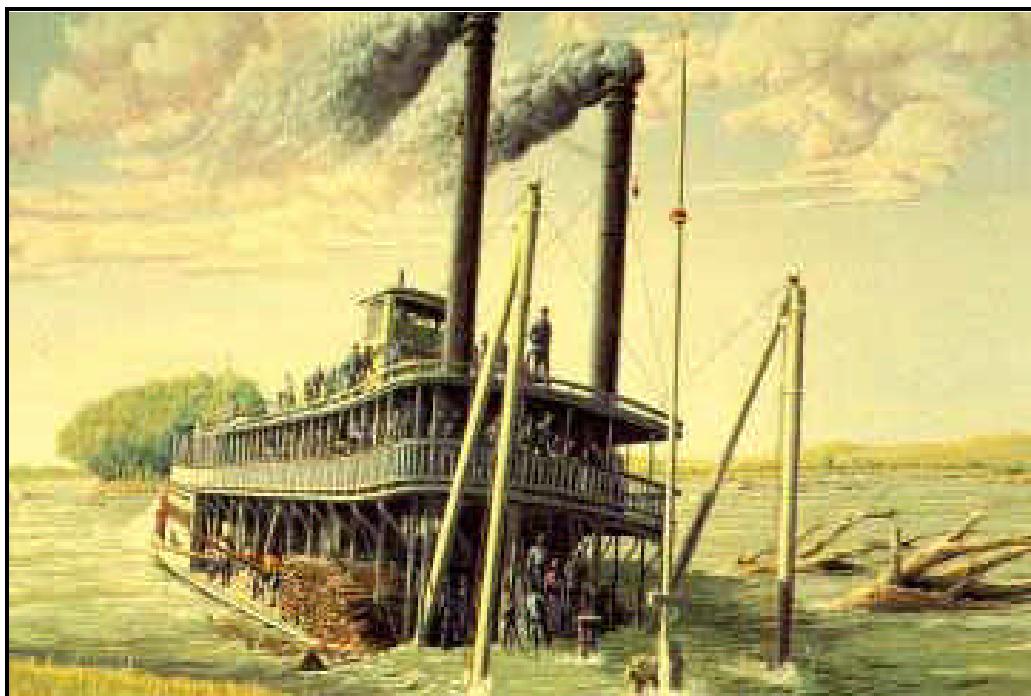


DeSoto National Wildlife Refuge
Draft Comprehensive Conservation Plan
Table of Contents

71	ty of hunt...
Beau
the
.....
.....
.....
99	ps in
Lam	Bertr
the	Collec
and
tion.
.....
.....
.....
104
Des	oto
visit	ors at
the Visitor Center	106
Coyote pup.....	
181	
Snapping Turtle.....	
182	
Yellow bullhead catfish.....	
186	
Wood duck.....	
218	



Snow geese flock on lake in front of DeSoto Visitor Center, November, 1982
credit: John Jave



Steamboat *Bertrand* sinking in 1865 on what is now DeSoto National Wildlife Refuge
painting by Jim Trott